

## **FORMAT**

TITLE OF THE ABSTRACT :

Functional and radiological outcome of Kienbock's disease treated with vascularized bone grafting from distal radius

DEPARTMENT :

Dr Paul Brand Centre for Hand Reconstructive Surgery & Leprosy Reconstructive Surgery & Peripheral Nerve Surgery

NAME OF THE CANDIDATE: Dr Venkata Raveendra Reddy P

DEGREE AND SUBJECT : MS Orthopaedics

NAME OF THE GUIDE : Dr Samuel C Raj Pallipati

### **OBJECTIVES:**

The purpose of our research is to study if Vascularized bone grafting from distal radius effectively relieves pain and restores wrist function and return to near normal activities in Kienbock's disease. The specific objectives include

1. To assess pain relief
2. To assess improvement in Range of movement
3. To assess any change in Carpal height ratio
4. To assess functional outcome with Modified Mayo wrist Score

## METHODS:

A retrospective study was performed on patients who underwent distal radius vascularized bone grafting for Kienbock's disease in Paul Brand centre for Hand and leprosy Reconstructive Surgery from 1998 to March 2013. Demographic data including history of trauma, ulnar variance, duration of symptoms, preoperative pain intensity with VAS scale and Preoperative Carpal Height ratio and Stage of disease are collected and follow-up period was studied. Donor Vessel of grafting recorded. Post-operative Plain radiographs were used to assess revascularization of the lunate with Carpal Height Ratio. Functional outcome was assessed with Modified Mayo Wrist Score and graded as excellent, good, satisfactory and poor and compared with similar studies by other authors

## RESULTS:

The average postoperative pain intensity is 1 whereas preoperative pain intensity was 6 and there was statistically significant pain relief with P value 0.001. Average preoperative volar flexion and dorsiflexion are 47 and 52 whereas postoperative are 41 and 44. There is decrease in range of movement postoperatively which is not statistically significant. The average preoperative Carpal Height ratio was 0.45 while postoperative was 0.49. Improvement in Carpal Height Ratio was statistically significant with P value 0.001. Among the 13 patients in the study 2(15%) had excellent outcome, 7(54%) had good outcome and 3(23%) had satisfactory outcome. Only 1(8%) patient had poor outcome. This was similar to the published literature with more than 85% of patients had excellent to satisfactory results. One patient had closed extensor rupture post-operatively in our series. No history of any other complications. Vascularized bone grafting from distal radius for Kienbock's disease provides

good pain relief and prevents further collapse of lunate and in most of the patient restores preoperative employment status.